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RESULTS OF RECENT INVESTIGATIONS ON
PRICES IN THE UNITED STATES.

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In 1891 the Finance Committee of the United States Senate was instructed to gather information as to the course of prices and wages in the United States, the object in view being to secure authentic facts bearing on the effects of tariff legislation. In 1892 the first report of the Committee was presented, giving the results of an investigation as to retail prices immediately before and immediately after the passage of the Tariff Act of 1890. The second report of the Committee, issued during the present year, treats of the course of wholesale prices, of wages, and transportation rates, for the half century from 1840 to 1891. It is with the results of this second investigation that the present paper is concerned.

Virtually, both these reports may be regarded as publications of the Department of Labor. The Senate Committee wisely put the task of collecting the desired facts and figures in the charge of that Department, and the skill and judgment of Commissioner Wright have yielded results whose importance and interest to the economist can hardly be overstated. Not only that, but the task of analyzing, digesting, and presenting the salient results was put into the trained hands of Prof. R. P. Falkner, whose introductory synopsis cannot be too highly praised. The whole report fills four large volumes; of these the first contains Prof. Falkner's synopsis. Here economists will find much the greater part of the results on the movement of prices presented in so clear and so skillful a manner as to dispense largely with the need of consulting the detailed figures which occupy the later volumes.

The investigation is probably the most complete and thorough that has ever been made in regard to the develop-

ment of prices. The wholesale prices of 223 articles were obtained from 1860 to 1891, and the prices of 90 of these articles was secured for the whole period from 1840 to 1891. There are returns of wages for 443 distinct series of laborers, covering 21 occupations, running from 1860 to 1891; while for 61 of these series returns were obtained for the whole period from 1840 to 1891. There are elaborate data as to the development of transportation rates by rail and water. There is hardly a phase of the economic history of the United States on which the economist will not find valuable material in this great collection. In the present paper I shall discuss only the results in regard to the development of prices, and even as to these can touch on some of the more interesting topics only.

The first, and perhaps the most interesting point of all, is the method by which a general expression of the course of prices, from year to year, was obtained. The familiar index-number method was followed by Prof. Falkner, but followed with exceptional skill and with some variations from the customary applications of it. In preparing the index numbers the year 1860 was selected as a base, all prices in that year being indicated by the number 100. The selection of this year was due partly to the peculiar industrial conditions of the United States, and partly to the circumstance that many of the statistics could be carried back farther than 1860. It was a normal year, marked by prices neither much higher nor much lower than those of the years immediately before and after; it preceded the Civil War, giving a convenient standard for measuring the effects of the paper money issues of the War; it was the first year for which the figures were secured for the whole list of 223 articles. The prices for this year being, then, selected for the base, the prices for other years were indicated by their index numbers in relation to this standard. In averaging the index numbers, and so securing the general index number for earlier and later years, two methods were followed: the method of simple arithmetical

average, and that of the average weighted or modified according to the importance of the articles. The mode in which the weighted average was used, and the extent to which the results so secured differ from those of the simple arithmetical average, are among the most important features of the investigation.

The weighted average was applied by assigning importance to different commodities in proportion to their importance in the budget of expenditures of families of moderate means. In budgets gathered by the Department of Labor the items of expenditure of workingmen's families for food, clothing, and other things were ascertained, and weight was given to the different commodities, in making up the general average, according to their importance in these budgets. This method of weighting differs from that employed by Mr. Palgrave and by some German economists, who assign importance to different commodities according to the part which they bear in the total expenditure of the whole community. The results of the two methods must be the same if the share which a particular commodity had in the expenditure of the family type selected were the same as its proportion in the total expenditure of the community. But if the family type selected were that of the workingman, as in the Committee's report, it is probable that the results of the two methods would differ. Which is the better must depend upon the objects sought to be obtained. If a social object is had in view—if it is desired to learn whether the purchasing power of a workman's income has risen or fallen—the budget method is clearly the better. If the monetary problem alone is had in view—if it is desired to ascertain whether a given sum of money will buy more or less commodities at large—the method of importance according to general expenditure is the better.

Another question of much interest in the technique of statistics is that of the feasibility of carrying out the budget method. There are obviously great difficulties in ascertaining what proportion of the expenditure of the workman's

family goes to many of the articles whose prices are quoted. Prof. Falkner has met these difficulties with great skill, and, although he has been compelled to resort to suppositions and combinations of a somewhat artificial character, he has, nevertheless, surmounted the practical difficulties of the budget method with a high degree of success.

Turning now to the results secured by these two methods we find a surprising agreement. The main results are shown on Chart I, where the two lines indicate, one, the general range of prices as ascertained by the simple arithmetical average; the other, the general range of prices as ascertained by the weighted average. They run together with remarkable closeness. During the years from 1840 to 1860 they diverge somewhat, the weighted average being lower than the simple average. The divergence may arise because the prices of a smaller number of articles were ascertained in this earlier period, and may be due to the fact that food, which of course affects the weighted average more than the arithmetical average, was then lower. But in the thirty years from 1860 to 1891 the results are in remarkably close correspondence. The extraordinary rise in prices due to the paper issues of the Civil War comes out with dramatic force, while the fall in prices from the close of the war to the resumption of specie payments in 1879 is equally patent. After 1879 there is first a slight rise, during the period of activity which set in with the year 1880, then a slow but fairly steady tendency to a fall. For further comparison with the United States prices the course of prices in Europe, according to the index number prepared by the late Prof. Soetbeer, and in the United States according to the present investigation, are shown on the second chart. The Soetbeer figures, it will be remembered, are computed from the arithmetical average of the prices of 114 articles, and may be fairly compared with the average similarly computed for United States prices.

Another problem on which the report throws light, though not so much light as might be desired, is the relation of the

CHART I.

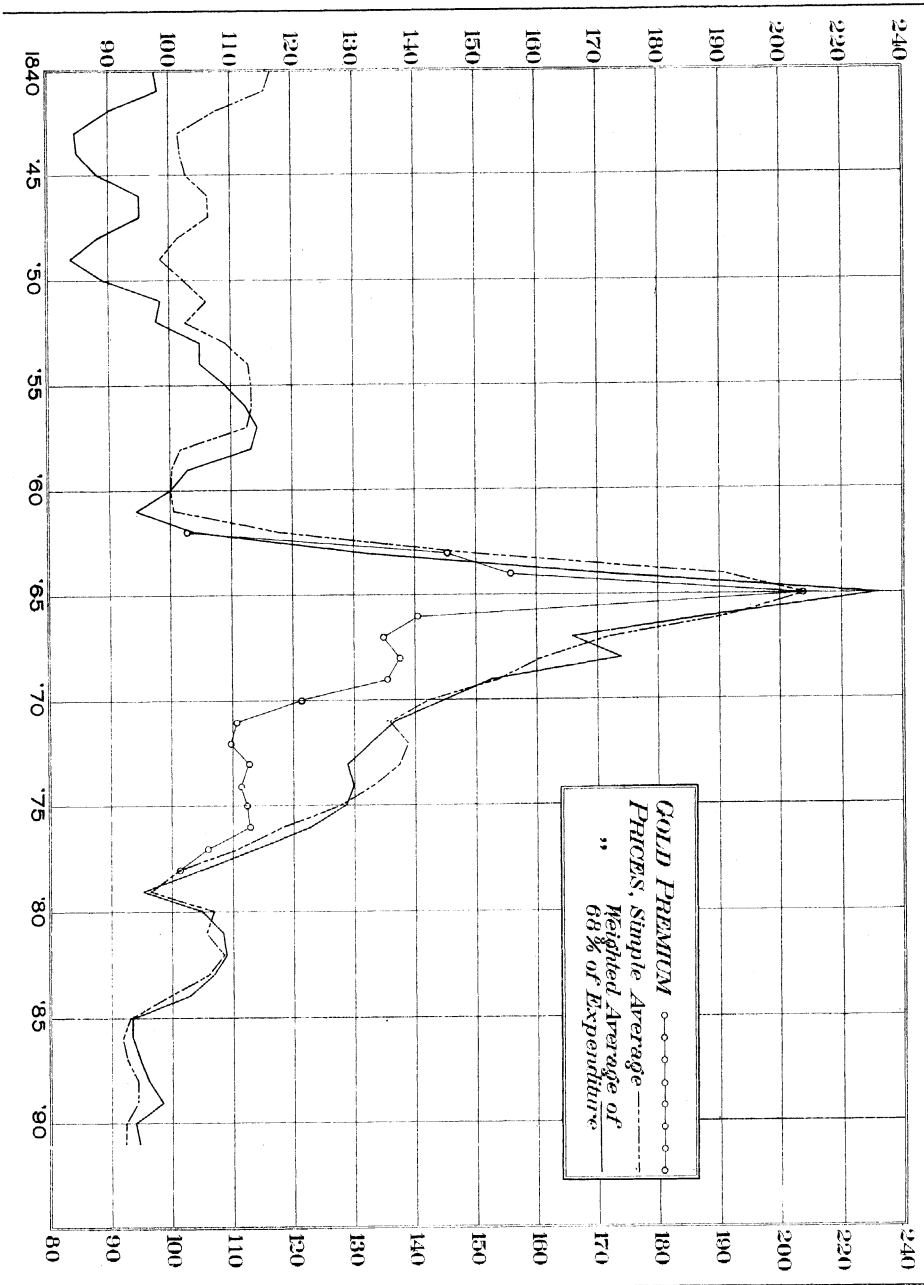
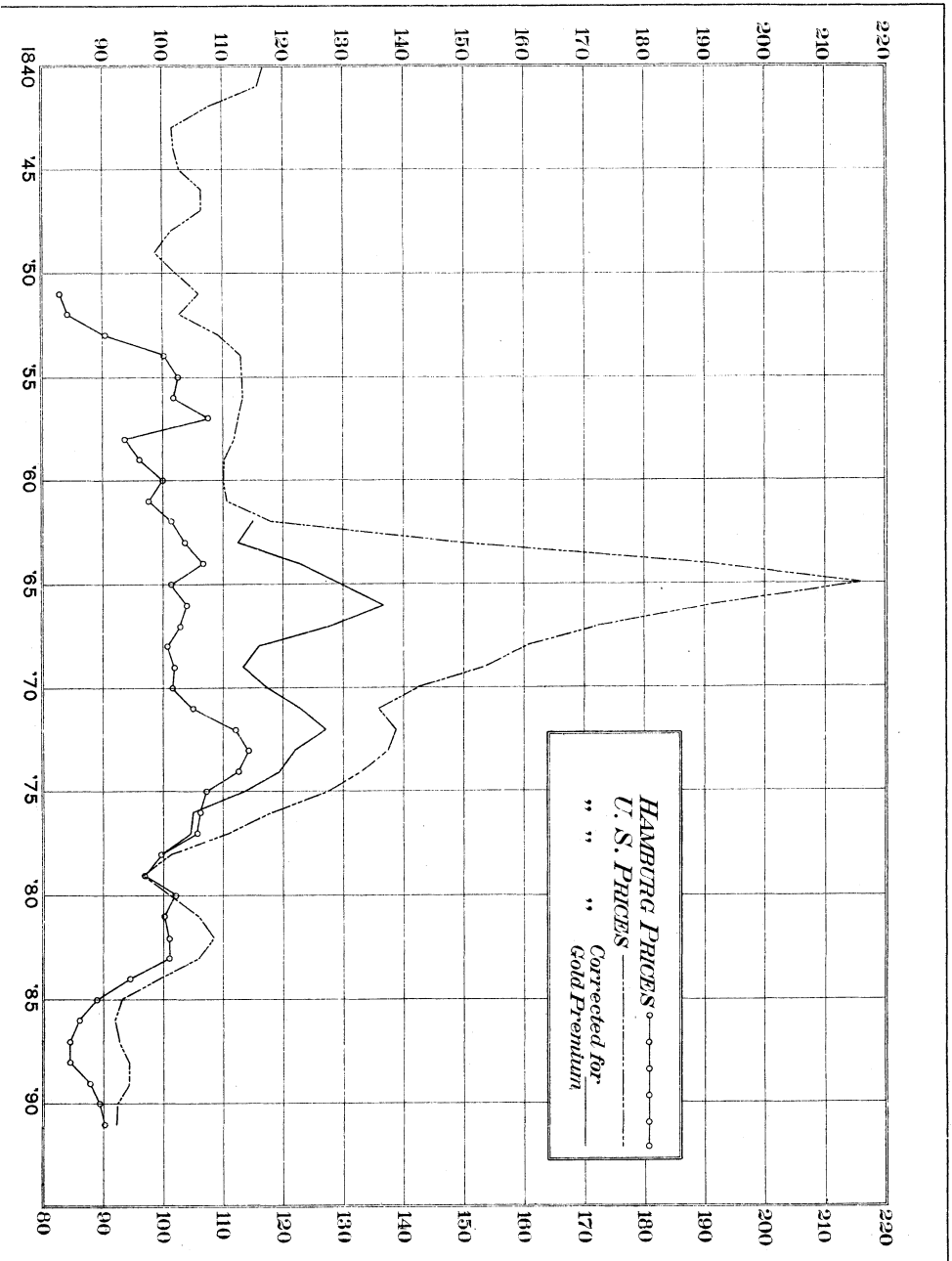


CHART II.



premium on specie to the general range of prices during the period of suspended payments. While the premium on specie may be taken for some purposes as a measure of the depreciation of inconvertible paper, the real depreciation is measured by the general rise in prices over what they would have been under a specie standard. With that general rise the premium on specie may or may not correspond. For the purpose of illustrating the result on this point the course of the specie premium has been indicated on Chart I, and may be compared with the movement of prices as ascertained by the simple arithmetical average. Unfortunately, the comparison is not sufficiently complete. The prices ascertained and averaged are the January prices of each year; to make possible a direct comparison the line indicating the course of the specie premium had therefore to be derived from the January quotations of gold for each year. But the premium on gold fluctuated so violently from 1862 to 1866 that these January quotations give us by no means an accurate picture of the course of the gold premium; and it is probable that the January quotations of prices during this period are similarly unsatisfactory as indicating the general movement of prices during these years of confusion. The comparison of the two therefore cannot be considered very valuable for these earlier years. After 1866, or 1867, the fluctuations both in prices and in gold premium were less abrupt. The January quotations of the two are more comparable and more trustworthy as indicating the situation for the year, and the lines of the Chart are more instructive. It will be seen that the gold premium sinks more rapidly than does the course of general prices. In other words, the real depreciation of the currency was then greater than the gold premium indicated.